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At Allegheny River's headwaters, treatment plant for fracking wastewater stirs debate



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Editor's note: This story has been updated to clarify a paragraph that was unclear about the timeframe for discharges of shale drilling wastewater at treatment plants, which hasn't taken place since 2011.

COUDERSPORT, Pa. — The Allegheny River begins its 325-mile meander to Pittsburgh's Point in rural Potter County, flowing through town as a still, small stream — no wider than a country lane and rarely deeper than a fisherman's chest waders.

In Pennsylvania's northern tier, the river ripples and pools through a landscape with more deer than people, more trees than telephone poles and more pickup trucks than sedans.

As the river flows west, through the backyards of homes along State Route 6, it passes the Coudersport Area Municipal Authority sewage treatment plant where Epiphany Water Solutions, a Lawrenceville-based startup, has proposed hooking up its first commercial shale gas drilling and fracking wastewater treatment plant.

The proposal, which the state Department of Environmental Protection is considering permitting, would allow Epiphany to accept and store truckloads of wastewater — up to 400,000 gallons a day — from shale gas drillers. That water would be injected into a natural gas heated-evaporation and distillation boiler where salts and other chemical contaminants would be removed. Up to 42,000 gallons a day of the remaining water would be piped through the municipal sewage treatment plant, then discharged into the Allegheny River.

If approved by the DEP, it would be Epiphany's first desalination and distillation site in the state.

Supporters say the shale gas drillers need a regulated place to get rid of millions of gallons of wastewater produced by the drilling and hydraulic fracturing process. Supporters also note that a more robust drilling presence could help fill the economic hole created when Coudersport-based Adelphia Communications Corp., then the fifth-largest cable company in the U.S., went bankrupt in 2002.

Allegheny River headwaters: Epiphany's project proposal (Post-Gazette) Opponents of the Epiphany proposal say the company's water treatment technology is untested and won't remove all of the fracking chemicals or naturally occurring radioactive elements in the drilling wastewater and sooner or later will degrade the river, which is a source of drinking water for millions of people in dozens of municipalities downstream, including Pittsburgh.

According to the U.S. Environmental Protection Agency, wastewater from shale gas drilling and hydraulic fracturing operations can contain high concentrations of salt, also called total dissolved solids or "TDS," various organic and inorganic chemicals, metals, and naturally occurring radioactive materials, which can be harmful to river ecology if not properly handled, treated and disposed.

Some of the loudest opposition has come from the Seneca Nation, whose tribal lands sit astride the river they know as the "Ohi:yo" or "good river," along the Pennsylvania-New York border, 65 miles downstream from the proposed wastewater treatment plant.

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Somewhere in the middle, at least for now, is Ed Easton III, owner of Potter County Outfitters, a hunting, fishing and trapping store on Route 6 near the sewage treatment plant, and one of five CAMA board members who will decide whether to greenlight the proposed facility.

“The drillers are drawing millions of gallons of water from our streams and lakes, and aren’t going away anytime soon. This treatment plant is a possible solution, a way to put clean water back,” Mr. Easton said from behind a counter that separated the rest of the store from a wall of rifles, shotguns and ammunition.

“But as an authority board member, we are stewards of clean water. This is the hottest topic we’ve faced, and a decision we on the board are not taking lightly,” he said. “We know we are at the headwaters. We know that the Allegheny River is the lifeline of the area, our claim to fame.”

Mr. Easton said the authority has signed a nonbinding agreement to lease Epiphany the land next to the sewage treatment plant, but a final decision on the proposal — what he called a “demonstration project” — is months away and will be informed by the action the DEP takes on the facility’s permits.

“We’re still researching this thing and we’re not a bunch of hicks,” Mr. Easton said. “We understand what can happen if this thing goes bad.”

A long history of hurt

And so do the Seneca. More than 100 Seneca attended the regular CAMA board meeting last month, banging drums and singing outside the meeting room and carrying signs saying “Stop Fracking with our children’s future,” “Defend Ohi:yo’,” and “Water is Sacred.”

A half-dozen spoke passionately against the Epiphany proposal, with several warning against “poisoning” the river that has played a central role in their tribe’s culture and heritage.

“This is one of those things you can’t afford to play around with at the headwaters of a major river,” Jason Corwin, a Seneca spokesman, said at the meeting.

Seneca President Todd Gates, in a phone interview, said that even if the Epiphany facility works as advertised, unintentional pollution releases could occur from the process and from the six to eight large wastewater holding tanks that will be built within the river’s 100-year flood plain.

“There is no proven technology that allows for the complete treatment of wastewater from fracking, particularly in the Marcellus Shale region,” Mr. Gates said. “Allowing this project to move forward would be a reckless assault on Mother Earth, the resources of the Ohi:yo’, the health of thousands of downstream and future generations.”

Mr. Gates said the Seneca have a long history of hurt when it comes to encroachments, intentional and otherwise, on its lands and rivers, “and the Kinzua Dam, that’s always in the back of our minds.”

In the early 1960s, the federal government used eminent domain to override the Canandaigua Treaty of 1794, signed by President George Washington, and take more than 10,000 acres of Seneca land for the Kinzua flood control dam and reservoir that formed behind it and flooded two tribal towns on the historic Cornplanter Tract, displacing more than 600 residents.

And, in 1974, Seneca land was inundated by radioactive waste that washed out of a commercial disposal site near **West Valley**, N.Y. The U.S. Department of Energy estimates cleanup costs at \$8 billion and work is ongoing.

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The treaty provides a solid legal basis, Mr. Gates said, but it has been violated before.

“That said, the Seneca Nation is always concerned about the environment and preserving it. So anyone who wants to compromise that, we’re going to fight them,” he said.

Inaccurate information

But Tom Joseph, Epiphany co-founder and chief technology officer, said opposition to the facility, though well-intentioned and sincere, is based on inaccurate information.

“The false information that has been spread by opponents to our project is very obviously designed to undermine the oil and gas industry,” he said, “rather than addressing the legitimate environmental challenges that Epiphany is striving to resolve in a sustainable and responsible way.”

The Epiphany facility, which will cost more than \$1 million to build and install, would be a closed-loop boiler system that will produce water discharges “clean enough to drink,” he said.

A big concern for opponents is radioactive materials in the wastewater. University researchers and DEP regulators have found high concentrations of radionuclides from shale gas drilling wastewater in river and creek sediment near the discharge pipes of at least four water-treatment plants in the lower Allegheny River watershed.

Shale gas drillers have not used municipal sewage treatment plants to dispose of wastewater containing radionuclides since 2011, but did so prior to that.

Mr. Joseph said the Epiphany process is different.

“Unlike some other companies, Epiphany does not believe in dilution as a treatment method,” he said. “Epiphany’s facility legitimately purifies the water and removes all radiological contamination to non-detectable levels based on federal and state limits prior to discharge to the [publicly owned treatment works] or to the waterways.”

Scott Blauvelt, director of regulatory affairs for JKLM Energy LLC, one of the most active shale gas companies operating in Potter County and potentially Epiphany’s main customer, said JKLM needs a proven, more economical wastewater disposal option for its well sites.

The Sewickley-based shale gas driller now recycles what wastewater it can to new wells or trucks excess wastewater to deep-well disposal sites in Ohio or West Virginia.

He said the Epiphany process uses similar technology to the Eureka Resources distillation treatment facilities successfully operating in Williamsport, Lycoming County, and Standing Stone, Bradford County, along the Susquehanna River.

“This was presented to us as an experimental project by Epiphany,” said George Stenhach, the CAMA solicitor. “We don’t see it as much of a risk. If a permit is granted by the DEP we expect there will be strict conditions.”

According to the DEP, the Epiphany permits are undergoing thorough review by the department’s water, air, waste management, waterways and wetlands programs to ensure that the river is not degraded. The DEP’s north-central office said it had finished an initial review of the Epiphany water quality management permit and sent a technical deficiency letter to the company.

The DEP has received more than 3,000 comments on the Epiphany proposal.

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One of those was from Pete Ryan, a long time Coudersport area conservationist, who said he supports it.

“The best scenario would be to not have any fracking or frack water to treat, but that horse is out of the barn and isn’t turning around,” said Dr. Ryan, a retired dentist who is president of the God’s Country Trout Unlimited chapter he founded in 1979.

He also holds leadership positions in the Upper Allegheny Watershed Association, the Kettle Creek Watershed Association and the upper First Fork Watershed Association, to name a few.

He said the Epiphany system could be a “win-win for the river,” eliminating or limiting withdrawals to supply the 8 million to 10 million gallons of water needed to drill and frack each well into the deep Utica Shale formation, and adding clean, distilled water.

“We’ve been praying for someone to do this, to put water back in the river system, and that’s what this appears to be,” Dr. Ryan said. “It’s better than injecting wastewater into the ground.”

But he also is hedging that bet. If the DEP approves the Epiphany permit, he said, the Potter County and Upper Allegheny conservation districts and his Trout Unlimited chapter will install in-stream monitors to provide independent monitoring of the discharges.

“If I end up with egg or beer on my face, I’ll be terribly surprised,” he said. “But there is risk in anything that’s new.”

Save the Allegheny

The battle against the Epiphany proposal, which began last spring, is led by “Save the Allegheny,” a loose confederation of regional advocates and activists.

On many days, it’s run from the front seat of Laurie Barr’s car, or the back room of Bryan Welsh’s dog-eared used bookstore on Coudersport’s Main Street, where stacks of copied documents about Epiphany fill file cabinets and tabletops.

Ms. Barr pointed out some of the problems with the Epiphany proposal during a visit earlier this month to the Coudersport Area Municipal Authority, just outside Coudersport.

“This area often gets flooding, both in the spring and winter,” she said, pointing to an overgrown field next to the the sewage treatment plant that Epiphany has leased for construction of its treatment facility. The site is about 100 yards from the river.

She said wastewater is now recycled, whereas the new system would discharge it into surface water.

“We think it’s a step backwards,” she said.

Mr. Welsh, a former Coudersport borough councilman, said it makes no sense to allow construction of an untested toxic-waste treatment plant on a flood plain in a stretch of river where habitat for endangered fish and mussels is fragile.

He said Epiphany hasn’t made public, what chemicals, salts and radioactive elements are in the wastewater it will be receiving. And it hasn’t disclosed any test results that indicate how effective the company’s process is in removing those contaminants.

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“If the process works so wonderfully and can put out purified water they say is ‘cleaner than rainwater,’ why do they need to put the effluent through our sewer system?” Mr. Welsh said.

He said JKLM “is trying to take advantage of the fact that we’re a small town and economically depressed.”

Potter County has a population of 17,000 people and is one of the poorest counties in the state.

“Some people were waiting for another company to come in and save us,” Mr. Welsh said. “Unfortunately that turned out to be the oil and gas industry, which promptly had a drilling accident that contaminated the groundwater table, caused our water to turn colors and shut down the hospital. That’s one reason we don’t feel we can trust these people.”

Mr. Welsh was referring to a September 2015 accident in which JKLM was fined for a drilling accident that contaminated groundwater and private and public water supplies in Coudersport.

Coudersport Councilman Brian Ruane said he’s opposed to the Epiphany proposal and would like to see the CAMA, an independent authority, reject it.

“I’ve researched the company and it doesn’t have much of a track record, so I think Potter County is not the place for such an experiment to take place,” Mr. Ruane said.

Objections raised

A number of federal and state agencies, Native American organizations and environmental groups don’t think so, either.

The Pennsylvania Fish and Boat Commission, New York State Department of Environmental Conservation, the U.S. Army Corps of Engineers, Pittsburgh District; the Seneca Nation Tribal Council, the Seneca Nation president’s office, the National Congress of American Indians, the U.S. Fish and Wildlife Service, and Clean Water Action have raised concerns about the proposed facility in official comment letters to either the DEP or CAMA about the proposed facility.

The DEP said it will continue to review Epiphany’s water quality management permit and if satisfied will issue a draft permit, followed by a 30-day public comment period. There is no deadline for the review.

Ms. Barr, noting that it’s the same river that flows by Pittsburgh’s Point, said “if something catastrophic happens, we can’t replace that water source,” she said. “The risks are so significantly high and the liability is so great.”

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